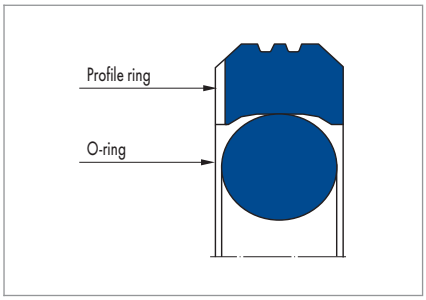
MERKEL ROTOMATIC M 16



PRODUCT DESCRIPTION

Two-piece Merkel seal set for sealing pistons, consisting of one PTFE profile ring and an O-ring as a pre-load component.

PRODUCT ADVANTAGES

Double-acting piston seal for pivoting motions in hydraulic systems; for standardised housing according to ISO 7425/1; preferably for usage in hydraulic joints and rotary joints.

- Short
- Highly resistant to hydraulic fluids
- Low friction, free of stick-slip

APPLICATION

- Excavators
- Rotary joints
- Grippers

MATERIAL

PTFE profile ring

Material	Code	Hardness
PTFE glass/ MoS2 compound	PTFE GM201	–

O-ring

Material	Code	Hardness
Nitrile rubber	80 NBR B241	80 Shore A
Fluoro rubber	80 FKM K670	80 Shore A

OPERATING CONDITIONS

Pressure p	40 MPa
Running speed v	0,5 m/s

Medium/ Temperature	PTFE GM201/NBR	PTFE GM201/FKM
Hydraulic oils HL, HLP	−30 °C ... +100 °C	−10 °C ... +150 °C
HFA fluids	+5 °C ... +60 °C	+5 °C ... +60 °C
HFB fluids	+5 °C ... +60 °C	+5 °C ... +60 °C
HFC fluids	−30 °C ... +60 °C	−10 °C ... +40 °C
HFD fluids	–	−10 °C ... +150 °C
Water	+5 °C ... +100 °C	+5 °C ... +100 °C
HETG (rapeseed oil)	−30 °C ... +80 °C	−10 °C ... +80 °C
HEES (synthetic ester)	−30 °C ... +60 °C	−10 °C ... +100 °C
HEPG (glycol)	−30 °C ... +60 °C	−10 °C ... +80 °C
Mineral greases	−30 °C ... +100 °C	−10 °C ... +150 °C

DESIGN NOTES

Please observe our general design notes in ➔ Technical Manual.

Surface quality

Peak-to-valley heights	R_a	R_{max}
Sliding surface	0,05 ... 0,3 µm	≤2,5 µm
Groove base	≤1,6 µm	≤6,3 µm
Groove flanks	≤3,0 µm	≤15,0 µm

The surface hardness must be approx. 45 to 60 HRC (depth of hardening min. 0,5 mm). Percentage contact area M_r >50% to max 90% at cutting depth c = Rz/2 and reference line C ref = 0%. Abrasive surfaces, ridges, scratches and blow-holes are to be avoided.

Tolerances

Nominal Ø d	D	d
≤500 mm	H8	h9
>500 mm	H7	h8

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